

## Claims

1. Process for the preparation of an oleophobic inorganic membrane from an inorganic membrane and at least one perfluoroalkyl compound, in which the inorganic membrane is surface-modified with a perfluoroalkyl compound and an oleophobic inorganic membrane is obtained.
2. Process according to Claim 1, in which the inorganic membrane is a ceramic membrane.
3. Process according to Claim 1, in which the inorganic membrane is a metal membrane.
4. Process according to Claim 1, in which the inorganic membrane is surface-modified by silanization with perfluoroalkyl compounds.
5. Process according to Claim 1, in which the inorganic membrane is surface-modified by plasma coating with perfluoroalkyl compounds.
6. Process according to Claim 1, in which the inorganic membrane is surface-modified by painting with perfluoroalkyl compounds.
7. Process according to Claim 1, in which the inorganic membrane exhibits a pore size of 1 nm to 100  $\mu\text{m}$ .
8. Process according to Claim 1, in which the membrane additionally exhibits hydrophilic components in the surface matrix.
9. Oleophobic inorganic membrane surface-modified with perfluoroalkyl compounds.

10. Membrane according to Claim 9, which can be obtained by the process according to one of Claims 1 to 8.
11. Use of the oleophobic inorganic membrane according to Claim 9 or 10 in a venting system, for example of a fuel system and/or before a fuel adsorber.
12. Fuel adsorber, comprising at least one oleophobic inorganic membrane according to Claim 9 or 10.
13. Fuel adsorption section, comprising the fuel adsorber according to Claim 12.
14. Venting system of a fuel system, comprising a membrane according to Claim 9 or 10 and/or the fuel adsorber according to Claim 12 and/or comprising the fuel adsorption section according to Claim 13.